### DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

#### LAKE TROPHIC DATA

### MORPHOMETRIC:

Lake: TROUT POND

Town: FREEDOM Maximum depth (m): 6.7

County: Carroll Mean depth (m): 2.8

River Basin: Saco Volume (m³): 281000

Latitude: 43°50'26" N Relative depth: 1.9

Longitude: 71°07'45" W Shore configuration: 1.00

Elevation (ft): 670 Areal water load (m/yr): 5.00

Shore length (m): 1000 Flushing rate (yr<sup>-1</sup>): 1.80

Watershed area (ha): 82.9 P retention coeff:: 0.66

% watershed ponded: 0.0 Lake type: natural

| BIOLOGICAL:                      |     | 21 January 1993  | 12 August 1992       |
|----------------------------------|-----|------------------|----------------------|
| DOM. PHYTOPLANKTON (% TOTAL)     | #1  | RHIZOSOLENIA 65% | CHRYSOSPHAERELLA 45% |
|                                  | #2  |                  | RHIZOSOLENIA 25%     |
|                                  | #3  |                  |                      |
| PHYTOPLANKTON ABUNDANCE (cells/m | ıL) |                  | 1230                 |
| CHLOROPHYLL-A (µg/L)             |     |                  | 3.44                 |
| DOM. ZOOPLANKTON (% TOTAL)       | #1  | SYNCHAETA 39%    | KELLICOTTIA 27%      |
|                                  | #2  | KELLICOTTIA 33%  | POLYARTHRA 21%       |
|                                  | #3  | KERATELLA 21%    | KERATELLA 18%        |
| ROTIFERS/LITER                   |     | 401              | 205                  |
| MICROCRUSTACEA/LITER             |     | 16               | 78                   |
| ZOOPLANKTON ABUNDANCE (#/L)      |     | 422              | 285                  |
| VASCULAR PLANT ABUNDANCE         |     |                  | Common               |
| SECCHI DISK TRANSPARENCY (m)     |     |                  | 3.0                  |
| BOTTOM DISSOLVED OXYGEN (mg/L)   |     | 6.2              | 0.2                  |
| BACTERIA (E. coli, #/100 ml)     | #1  |                  | < 10                 |
|                                  | #2  |                  |                      |
|                                  | #3  |                  |                      |

### SUMMER THERMAL STRATIFICATION:

### stratified

Depth of thermocline (m): 4.7 Hypolimnion volume  $(m^3)$ : None

Anoxic volume  $(m^3)$ : 5000

| CHEMICAL:                |          |          | TROUT PON<br>FREEDOM | D |        |
|--------------------------|----------|----------|----------------------|---|--------|
|                          | 21 Janua | ary 1993 | 12 August 1992       |   |        |
| DEPTH (m)                | 2.0      | 4.0      | 1.5                  |   | 4.5    |
| pH (units)               | 6.2      | 6.1      | 6.7                  |   | 6.0    |
| A.N.C. (Alkalinity)      | 3.7      | 2.6      | 3.6                  |   | 3.9    |
| NITRATE NITROGEN         | < 0.02   | < 0.02   | < 0.02               |   | < 0.02 |
| TOTAL KJELDAHL NITROGEN  | 0.17     | 0.15     |                      |   |        |
| TOTAL PHOSPHORUS         | 0.010    | 0.010    | 0.010                |   | 0.014  |
| CONDUCTIVITY (µmhos/cm)  | 20.4     | 20.9     | 18.2                 |   | 19.7   |
| APPARENT COLOR (cpu)     | 26       | 27       | 47                   |   | 62     |
| MAGNESIUM                |          |          | 0.27                 |   |        |
| CALCIUM                  |          |          | 1.3                  |   |        |
| SODIUM                   |          |          | 1.6                  |   |        |
| POTASSIUM                |          |          | 0.35                 |   |        |
| CHLORIDE                 | < 3      | < 3      | < 3                  |   | < 3    |
| SULFATE                  | 2        | 2        | 2                    |   | 2      |
| TN : TP                  | 17       | 15       | ·                    |   | *      |
| CALCITE SATURATION INDEX |          |          | 3.9                  |   |        |

All results in mg/L unless indicated otherwise

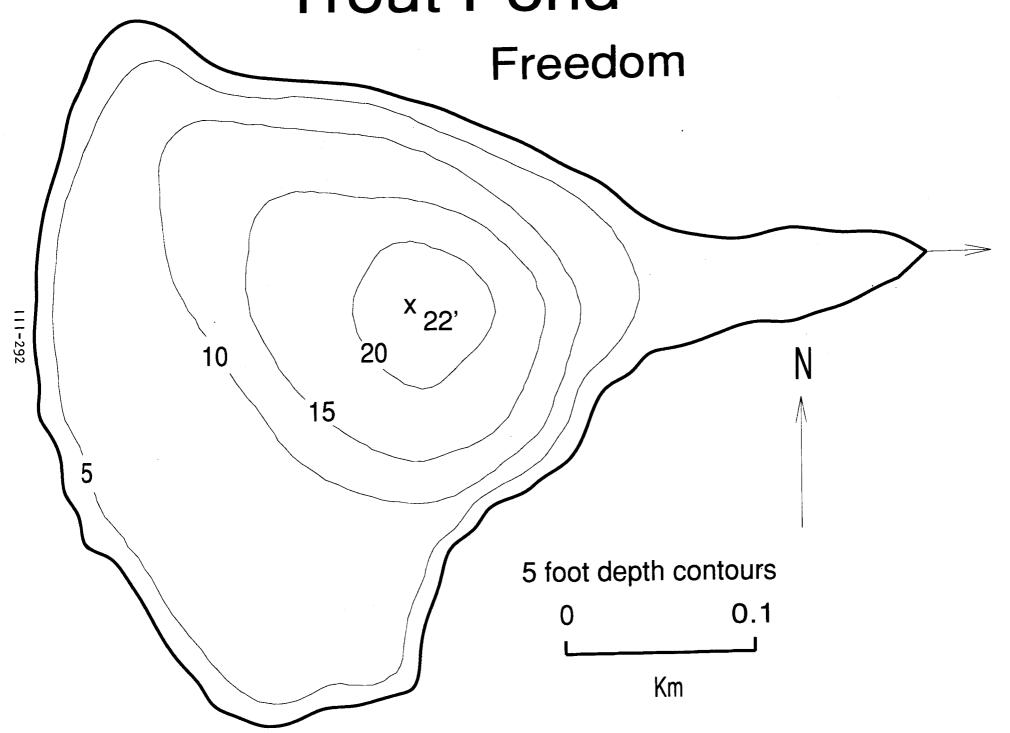
### TROPHIC CLASSIFICATION: 1992

| D.O. | S.D. | PLANT | CHL | TOTAL | CLASS |
|------|------|-------|-----|-------|-------|
| **   | 3    | 3     | 0   | 6     | Meso. |

### **COMMENTS:**

- 1. Also known as Stacy Pond, Stacy Mountain Pond and Snake Pond.
- 2. This is a remote pond located on private property. Access is via a gated 4-wheel drive road. It was surveyed jointly with Fish and Game personnel.
- 3. Dominant genera of wholewater phytoplankton were Cosmarium (20%), Melosira (20%) and Elakatothrix (15%). Greens (65%) were the dominant class.

# Trout Pond



### FIELD DATA SHEET

LAKE: TROUT POND

DATE: 08/12/92

TOWN: FREEDOM WEATHER: SUNNY; 80 F.

| DATE: 00, 12, 32 |              |                      | ······································ |
|------------------|--------------|----------------------|--|
| DEPTH (M)        | TEMP<br>(°C) | *DISSOLVED<br>OXYGEN | OXYGEN<br>SATURATION                   |
| 0.1              | 23.2         | 9.6                  | 111 %                                  |
| 1.0              | 23.0         | 9.3                  | 108 %                                  |
| 2.0              | 22.8         | 9.1                  | 104 %                                  |
| 3.0              | 21.5         | 7.7                  | 85 %                                   |
| 4.0              | 19.3         | 3.7                  | 39 %                                   |
| 5.0              | 15.1         | 1.1                  | 11 %                                   |
| 6.0              | 12.0         | 0.2                  | 2 %                                    |
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SECCHI DISK (m): 3.0

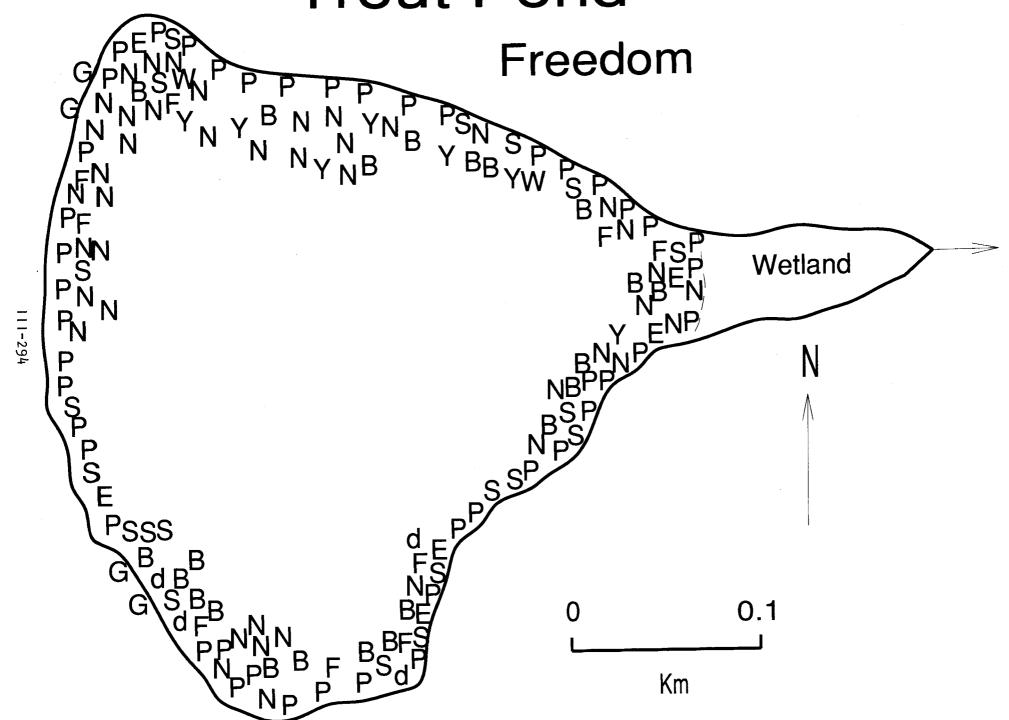
COMMENTS:

BOTTOM DEPTH (m): 6.5

TIME: 1150

\*Dissolved oxygen values are in mg/L

## **Trout Pond**



### AQUATIC PLANT SURVEY

| LAKE: TROUT POND |                         | TOWN: FREEDOM     | DATE: 08/12/92 |  |
|------------------|-------------------------|-------------------|----------------|--|
|                  | PLANT                   | NAME              | ABUNDANCE      |  |
| Кеу              | GENERIC                 | COMMON            |                |  |
| В                | Brasenia schreberi      | Water shield      | Scattered      |  |
| P                | Pontederia cordata      | Pickerelweed      | Common         |  |
| S                | Sparganium              | Bur reed          | Scattered      |  |
| N                | Nymphaea                | White water lily  | Common         |  |
| E                | Eriocaulon septangulare | Pipewort          | Sparse         |  |
| F                | Nymphoides cordatum     | Floating heart    | Scattered      |  |
| W                | Potamogeton             | Pondweed          | Sparse         |  |
| Y                | Nuphar                  | Yellow water lily | Sparse         |  |
| d                | Dulichium arundinaceum  | Three-way sedge   | Sparse         |  |
| G                | Gramineae               | Grass family      | Scattered      |  |
|                  |                         |                   |                |  |
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### OVERALL ABUNDANCE: Common

### **GENERAL OBSERVATIONS:**

1. The entire pond was surrounded by an encroaching wetland; the narrow outlet cove was part of the wetland.